

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-22. (Withdrawn)

23. (Currently Amended) A computer system for managing and analyzing enterprise portfolio data, comprising:

a memory;

a portfolio manager component that is stored in the memory and that is structured, when executed, to add to a portfolio representation structure items that correspond to transactions on the portfolio data, the portfolio data including financial investments; and

a portfolio analyzer component that is stored in the memory and that is structured, when executed, to present a plurality of views of the portfolio data as represented by the portfolio representation structure, wherein the views dynamically calculate and present multi-dimensional characterizations of the portfolio data while items are added using the portfolio manager.

24. (Original) The system of claim 23 wherein the portfolio data is from heterogeneous data sources that store data in a plurality of formats.

25. (Original) The system of claim 23 wherein the portfolio data represents investments from distinctive parts of an organization.

26. (Currently Amended) The system of claim ~~23-25~~ wherein the organization parts include at least two of management, marketing, sales, product management, manufacturing, research, development, IT, finance, operations, consulting, engineering, and human resources.

27. (Currently Amended) The system of claim 23 wherein the portfolio data includes ~~financial investments and~~ project management characterizations.

28. (Original) The system of claim 23 wherein the plurality of views includes at least one dimensioned attribute.

29. (Currently Amended) The system of claim ~~23-28~~ wherein the dimensioned attribute includes at least two of actual value, baseline value, plan value, target value, and scenario value.

30. (Original) The system of claim 23, further comprising:
a meta-object data management system for managing the portfolio representation structure.

31. (Original) The system of claim 30 wherein the structure is hierarchical.

32. (Currently Amended) A method in a computer system for representing, managing, and analyzing investments of an organization, comprising:

instantiating a hierarchy of object instances, each object instance representing an investment of the organization, wherein at least two object instances representing data from ~~different categories of investments that are different from each other;~~

receiving a request to display data from a plurality of the object instances according to an attribute specification; and

displaying the object instances of the plurality of object instances that match the attribute specification, in a manner that is in accordance with the attribute specification, so that multi-dimensional views of the matching objects are computed and displayed dynamically.

33. (Original) The method of claim 32, further comprising supporting changes to the hierarchy of object instances while displaying the object instances that match the

attribute specification, thereby concurrently allowing online transaction processing while supporting online analysis.

34. (Original) The method of claim 32 wherein the request to display data according to an attribute specification is received as properties of a datasheet associated with an object instance in the hierarchy.

35. (Original) The method of claim 32, each object instance having constituent attributes with associated values, wherein the displaying of the object instances that match the attribute specification further comprises:

determining from each matching object instance the constituent attributes and associated values;

dynamically constructing a virtual object instance to represent each aggregation of matching objects that is not already an instantiated object; and

displaying the constructed virtual objects along with the matching object instances.

36. (Original) The method of claim 35 wherein each virtual object instance automatically aggregates appropriate attributes of children object instances and children virtual object instances.

37. (Original) The method of claim 36 wherein at least one of the aggregated attributes represents time-phased data values.

38. (Original) The method of claim 36 wherein the attributes of the children instances specify whether they are to be aggregated to a parent virtual object instance.

39. (Original) The method of claim 35 wherein a value associated with at least one attribute is a dimensioned value.

40. (Original) The method of claim 39 wherein the dimensioned value comprises at least two of actual value, baseline value, plan value, target value, and scenario value.

41. (Currently Amended) The method of claim 32 further comprising defining, based on a datasheet, wherein the datasheet defines a dynamically created multi-dimensional view of the instantiated object hierarchy that is not previously stored in the computer system.

42. (Currently Amended) The method of claim 32 wherein the hierarchy of object instances includes one or more parent object instances each having one or more child object instances, wherein each child object instance of a parent object instance represents a relationship whereby the investment ~~associated with~~ represented by the parent object instance is an aggregation of the child object -instances associated with the parent object instance.

43. (Original) The method of claim 32 wherein the investments are part of an enterprise portfolio management system.

44. (Original) The method of claim 43 wherein the investments comprise heterogeneous data types in the form of at least two of financial investments, project management, collections of projects, programs, assets, human resources, products, portfolios, initiatives, applications, operations, processes, and activities.

45. (Original) The method of claim 43, the enterprise portfolio management system managing enterprise portfolios, wherein the enterprise portfolios comprise at least two of engineering, marketing, product management, manufacturing, sales, information technology, finance, human resources, research, development, and professional services portfolios.

46. (Original) The method of claim 32 wherein the investments include time-phased data.

47. (Original) The method of claim 46 wherein the time-phased data is stored in a manner that indicates a first designated time period in a virtual object instance and is stored in a manner that indicates a second designated time period in the object instances that are children of the virtual object instance that stores the time-phased data.

48. (Original) The method of claim 47 wherein the first designated time period is at least one of weekly, monthly, quarterly, and annually.

49. (Original) The method of claim 47 wherein the second designated time period is at least one of daily and hourly.

50. (Original) The method of claim 47 wherein the second designated time period is a custom defined range.

51. (Original) The method of claim 47 wherein the first designated time period is a custom defined range.

52. (Original) The method of claim 46 wherein a change to time-phased data of a virtual object instance is automatically reflected in changes to object instances that are children of the virtual object instance in which the change occurred.

53. (Original) The method of claim 32 wherein the object instances of the plurality that match the attribute specification is filtered based upon a security role associated with the request.

54. (Original) The method of claim 32, further comprising:
indicating that the request to display data according to the attribute specification is to be applied to a different plurality of object instances of the hierarchy; and
automatically modifying the display of the object instances to include object instances from the different plurality that match the attribute specification.

55. (Original) The method of claim 54 wherein the indication is to copy the request and the display of object instances includes the object instances from the plurality that match the attribute specification in addition to objects instances from the different plurality.

56. (Original) The method of claim 54 wherein the indication is to move the request and the object instances from the plurality that match the attribute specification are removed from the display unless the object instances from the plurality that match are also instances of the different plurality.

57. (Original) The method of claim 32, each object instance having constituent attributes with associated values, further comprising:
associating a chart definition with the request to display data according to the attribute specification, the chart definition having an associated set of chart parameters; and
automatically determining values for the associated chart parameters based upon the constituent attributes of the object instances that match the attribute specification.

58. (Original) The method of claim 57, further comprising:
presenting a chart that corresponds to the chart definition, such that the values displayed by the chart are automatically determined from the values associated with the constituent attributes of the object instances that match the attribute specification.

59. (Original) The method of claim 57, further comprising:
associating the chart definition with a request to display data from a different plurality of object instances according to a second attribute specification; and

automatically re-determining the values for the associated chart parameters based upon the constituent attributes of the object instances from the different plurality that match the second attribute specification.

60. (Original) The method of claim 59 wherein the second attribute specification is the same as the attribute specification.

61. (Original) The method of claim 59 wherein the chart definition is moved.

62. (Original) The method of claim 59 wherein the chart definition is copied.

63. (Currently Amended) A computer-readable memory medium containing instructions for controlling a computer system to represent, manage, and analyze investments of an organization, by:

instantiating a hierarchy of object instances, each object instance representing an investment of the organization, wherein at least two object instances representing data from different types of investments that are different from each other;

receiving a request to display data from a plurality of the object instances according to an attribute specification; and

displaying the object instances of the plurality of object instances that match the attribute specification, in a manner that is in accordance with the attribute specification, so that multi-dimensional views of the matching objects are computed and displayed dynamically.

64. (Original) The memory medium of claim 63, further comprising instructions that control the computer processor by concurrently allowing online transaction processing while supporting online analysis by supporting changes to the hierarchy of object instances while displaying the object instances that match the attribute specification.

65. (Original) The memory medium of claim 63 wherein the request to display data according to an attribute specification is received as properties of a datasheet associated with an object instance in the hierarchy.

66. (Original) The memory medium of claim 63, each object instance having constituent attributes with associated values, wherein the displaying of the object instances that match the attribute specification further comprises:

determining from each matching object instance the constituent attributes and associated values;

dynamically constructing a virtual object instance to represent each aggregation of matching objects that is not already an instantiated object; and

displaying the constructed virtual objects along with the matching object instances.

67. (Original) The memory medium of claim 66 wherein each virtual object instance automatically aggregates appropriate attributes of children object instances and children virtual object instances.

68. (Original) The memory medium of claim 67 wherein at least one of the aggregated attributes represents time-phased data values.

69. (Original) The memory medium of claim 66 wherein a value associated with at least one attribute is a dimensioned value.

70. (Original) The memory medium of claim 69 wherein the dimensioned value comprises at least two of actual value, baseline value, plan value, target value, and scenario value.

71. (Currently Amended) The memory medium of claim 63 further comprising instructions that control the processor by: defining, based on a datasheet, wherein

~~the datasheet defines~~ a dynamically created multi-dimensional view of the instantiated object hierarchy that is not previously stored in the computer system.

72. (Currently Amended) The memory medium of claim 63 wherein the hierarchy of object instances includes one or more parent object instances each having one or more child object instances, wherein each child object instance of a parent object instance represents a relationship whereby the investment ~~associated with~~represented by the parent object instance is an aggregation of the child object –instances associated with the parent object instance.

73. (Original) The memory medium of claim 63 wherein the investments are part of an enterprise portfolio management system.

74. (Original) The memory medium of claim 63 wherein the investments include time-phased data.

75. (Original) The memory medium of claim 74 wherein the time-phased data is stored in a manner that indicates a first designated time period in a virtual object instance and is stored in a manner that indicates a second designated time period in the object instances that are children of the virtual object instance that stores the time-phased data.

76. (Original) The memory medium of claim 74 wherein a change to time-phased data of a virtual object instance is automatically reflected in changes to object instances that are children of the virtual object instance in which the change occurred.

77. (Original) The memory medium of claim 63 wherein the object instances of the plurality that match the attribute specification is filtered based upon a security role associated with the request.

78. (Original) The memory medium of claim 63, further comprising instructions that control the computer processor by:

indicating that the request to display data according to the attribute specification is to be applied to a different plurality of object instances of the hierarchy; and

automatically modifying the display of the object instances to include object instances from the different plurality that match the attribute specification.

79. (Original) The memory medium of claim 63, each object instance having constituent attributes with associated values, further comprising instructions that control the computer processor by:

associating a chart definition with the request to display data according to the attribute specification, the chart definition having an associated set of chart parameters; and

automatically determining values for the associated chart parameters based upon the constituent attributes of the object instances that match the attribute specification.

80. (Original) The memory medium of claim 79, further comprising instructions that control the computer processor by

presenting a chart that corresponds to the chart definition, such that the values displayed by the chart are automatically determined from the values associated with the constituent attributes of the object instances that match the attribute specification.

81. (Original) The memory medium of claim 79, further comprising instructions that control the computer processor by:

associating the chart definition with a request to display data from a different plurality of object instances according to a second attribute specification; and

automatically re-determining the values for the associated chart parameters based upon the constituent attributes of the object instances from the different plurality that match the second attribute specification.

82. (Currently Amended) A portfolio management system for representing, managing, and analyzing investments of an organization, comprising:

a memory;

a portfolio management component that is stored in the memory and that is structured, when executed, to instantiate a hierarchy of object instances according to received data, each object instance representing an investment of the organization, wherein at least two object instances representing data from ~~different~~ types of investments that are different from each other; and

a portfolio analysis component that is stored in the memory and that is structured, when executed, to:

receive a request to display data from a plurality of the object instances according to an attribute specification; and

display the object instances of the of the plurality of object instances that match the attribute specification in a manner that is in accordance with the attribute specification, so that multi-dimensional views of the matching objects are computed and displayed dynamically.

83. (Original) The system of claim 82 wherein the system concurrently allows online transaction processing while supporting online analysis by supporting changes to the hierarchy of object instances while displaying the object instances that match the attribute specification.

84. (Original) The system of claim 82 wherein the request to display data according to an attribute specification is received as properties of a datasheet associated with an object instance in the hierarchy.

85. (Currently Amended) The system of claim 82, each object instance having constituent attributes with associated values, wherein the portfolio analysis component is further structured, when executed, to display of the object instances that match the attribute specification by:

determining from each matching object instance the constituent attributes and associated values;

dynamically constructing a virtual object instance to represent each aggregation of matching objects that is not already an instantiated object; and

displaying the constructed virtual objects along with the matching object instances.

86. (Original) The system of claim 85 wherein each virtual object instance automatically aggregates appropriate attributes of children object instances and children virtual object instances.

87. (Currently Amended) The system of claim 86 wherein at least one of the aggregated attributes- represents time-phased data values.

88. (Original) The system of claim 85 wherein a value associated with at least one attribute is a dimensioned value.

89. (Original) The system of claim 88 wherein the dimensioned value comprises at least two of actual value, baseline value, plan value, target value, and scenario value.

90. (Currently Amended) The system of claim 82 wherein the portfolio analysis component is further structured, when executed, to: define, based on a datasheet, ~~datasheet defines~~ a dynamically created multi-dimensional view of the instantiated object hierarchy that is not previously stored in the computer system.

91. (Currently Amended) The system of claim 82 wherein the hierarchy of object instances includes on or more parent object instances each having one or more child object instances, wherein each child object instance of a parent object instance represents a relationship whereby the investment associated with~~represented by~~ the parent object instance is an aggregation of the child object -instances associated with the parent object instance.

92. (Original) The system of claim 82 wherein the investments are part of an enterprise portfolio management system.

93. (Original) The system of claim 82 wherein the investments include time-phased data.

94. (Original) The system of claim 93 wherein the time-phased data is stored in a manner that indicates a first designated time period in a virtual object instance and is stored in a manner that indicates a second designated time period in the object instances that are children of the virtual object instance that stores the time-phased data.

95. (Original) The system of claim 93 wherein a change to time-phased data of a virtual object instance is automatically reflected in changes to object instances that are children of the virtual object instance in which the change occurred.

96. (Original) The system of claim 82 wherein the object instances of the plurality that match the attribute specification is filtered based upon a security role associated with the request.

97. (Currently Amended) The system of claim 82 wherein the portfolio analysis component is further structured, when executed, to:

receive an indication that the request to display data according to the attribute specification is to be applied to a different plurality of object instances of the hierarchy; and

automatically modify the display of the object instances to include object instances from the different plurality that match the attribute specification.

98. (Currently Amended) The system of claim 82, each object instance having constituent attributes with associated values, further comprising:

a charting tool that is structured, when executed, to:

associate a chart definition with the request to display data according to the attribute specification, the chart definition having an associated set of chart parameters; and

automatically determine values for the associated chart parameters based upon the constituent attributes of the object instances that match the attribute specification.

99. (Currently Amended) The system of claim 98 wherein the charting tool is further structured, when executed, to present a chart that corresponds to the chart definition, such that the values displayed by the chart are automatically determined from the values associated with the constituent attributes of the object instances that match the attribute specification.

100. (Currently Amended) The system of claim 98 wherein the charting tool is further structured, when executed, to:

associate the chart definition with a request to display data from a different plurality of object instances according to a second attribute specification; and

automatically re-determine the values for the associated chart parameters based upon the constituent attributes of the object instances from the different plurality that match the second attribute specification.

101.-236. (Withdrawn)